

Be careful of heat stroke

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This year's rainy season has ended, and the summer season has arrived. Recently, the news about new record high temperatures has been frequently reported in various places across Japan, and climate change has also been a hot topic worldwide in recent years, so we need to be aware of heat stroke in our daily lives.

Under normal circumstances, when our body temperature rises, we sweat and our body temperature decreases by heat evaporation. Further, an increase in blood flow to the surface of our body by expanding peripheral blood vessels releases internal heat through the skin to the surrounding air, so our body temperature is regulated to decrease. However, under certain conditions that may cause heat stroke, the thermoregulation function of decreasing our body temperature cannot work effectively, so internal heat accumulates in our body, causing our body temperature to increase which results in heat stroke.

In particular, conditions that make heat stroke more likely are the external environment, physical condition, and activity (work).

For example, changes in the external environment, such as high temperature, high humidity, strong sunlight, and lack of wind can make it difficult for heat to escape to the outside air which causes body temperatures to rise, so it is necessary to be careful about heat stroke in such conditions. The "Heat Stress Index" (WBGT), which incorporates humidity, thermal environment, and temperature, is an index aimed at preventing heat stroke. There are indicators for two alerts such as "Special Heat Stroke Alert (WBGT 35 or higher)" or "Heat Stroke Alert (WBGT 33 or higher)", and even if these alerts are not issued, if the WBGT is 31 or higher, "exercise should be avoided", and it is recommended to "avoid going out as much as possible and move to a cooler place". Additionally, when the WBGT is 28 or higher, "extreme vigilance" is required during daily life activities and exercise. "Heat Illness Prevention information" sites and weather forecasts are updated and reported every day, so it is recommended to get daily information as appropriate and pay attention to "heat stroke" prevention.

Regarding "physical condition", people with chronic illnesses and the elderly need to be careful. Even for healthy people, if they have a cold (fever), diarrhea, a hangover, or lack of sleep, the thermoregulation function through sweat does not work properly, so vigilance is required.

For "activity (work)", your body temperature is likely to increase when doing strenuous exercise or doing unfamiliar exercises. Also, you should be careful of working outdoors for long periods of time or in situations where you are unable to drink water, as your body temperature can easily increase.

It is important to take precautions to avoid heat stroke.

In your daily life, make sure to wear clothes that are airy and cool. Also, when going out, use a shade, a parasol, and a hat, and replenish your water and salt intake as appropriate. Try to use air-conditioned areas and keep your body temperature at a healthy level. Also, try to stay healthy by getting adequate sleep and not staying up too late. Be especially careful if you are not feeling well.

Please also refer to the previous "Hokesen Newsletter" No. 228 for first aid measures for heat stroke.

If you have any questions, please consult the Health Care Center, TUFS.

References:

Heat Illness Prevention Information

<https://www.wbgt.env.go.jp/en/>

"Hokesen Newsletter" No. 228

https://www.tufs.ac.jp/english/student/NEWS/student_life/hokesen228_1.html